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Dominique Conte

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EXAMINER

WIECZOREK, MICHAEL P

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,146

Applicant(s)

CONTE ET AL.

Examiner

Michael Wiczorek

Art Unit

1792

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) 3,6,10,12,13,18 and 20 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) 1,2,4,5,7-9,11,14-17,19 and 21-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/16/2005
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species 2 for category A, species 1 for category B and species 2 for category C in the reply filed on September 22, 2008 is acknowledged. The traversal is on the ground(s) that the species have unity and that no prior art was submitted to show lack of unity between the species. This is not found persuasive because Medwick et al (U.S. Patent Publication No. 2002/0176988) teaches the genus for each set of species disclosed in the election of species requirement filed on July 21, 2008. Thus, Medwick et al show that there is lack of unity between the sets of species because Medwick et al teaches the common technical feature of each set of species.
2. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The Application contains three set of species which are as follows:

Category A: The application contains the following species related to the composition of the temporary protective coating and these species are as follows:

Species 1A: a mineral layer

Species 2A: A single compound among MgF_2 , LaF_2 , AlF_3 , CeF_3 , TiO_2 , ZrO_2 , AlO_3 , praseodymium oxide, mixture of alumina and praseodymium oxide

Species 3A: polytetrafluoroethylene

Species 4A: marking ink and/or polymer constituting marking ink binder.

For this set of species claims 1, 7-11 and 14-24 are generic.

Category B: The application contains the following species related to the structure of the layer and these species are as follows:

Species 1B: continuous structure

Species 2B: a discontinuous structure

For this set of species claims 1-8 and 11-24 are generic.

Category C: The application contains the following species related to the method of removing the protection layer and the species are as follows:

Species 1C: acid solution

Species 2C: dry wiping

Species 3C: application of ultrasound

For this set of species claims 1-17 and 21-24 are generic.

Applicant is required, in reply to this action, to elect a single species from each category to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after

the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

3. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features because, as was discussed above, Medwick et al teaches the genius of each of the sets of species disclosed above. For the species of Category A, Medwick et al teaches a temporary protective coating that can be applied to any type of glass substrate (Page 1 Paragraph 0002 and Page 3 Paragraph 0023), which would include ophthalmic lens. Thus the technical feature of Category A, a temporary protective coating, is known within the art. For the species of Category B, Medwick et al teaches that the temporary protective coating can be continuous or discontinuous (Page 6 Paragraph 0045), thus the technical feature of Category B is known. And for the species of Category C, Medwick et al teaches removing the temporary protective coating (Page 4 Paragraph 0031), thus the technical feature of Category C is known.

4. In the Applicant's response filed September 22 and 29, 2008 a provisional election was made with traverse to prosecute MgF_2 of species 2A, species 1B, and species 2C. This election is considered a provisional election since prior art was not submitted previously showing lack of unity between the species. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3, 6, 10, 12-13, 18 and 20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claim 9 recites the limitation "the layer has a substantially continuous structure". It is not clear what "layer" this limitation is referring to. For the purposes of this examination of the application the limitation "the layer" will taken to mean the temporary protective layer based on the specification of the present case (Page 8 Lines 22-24). Clarification on this issue is requested.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
10. Claims 1-2, 7-9, 11, 14-17, 19 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Souel et al (U.S. Patent 6,281,468) in view of Medwick et al.

Souel et al teaches a method of marking the face of an ophthalmic lens (Column 1 Lines 6-10) wherein a low surface energy hydrophobic layer has been deposited over a high surface energy coating or the lens substrate (Column 3 Lines 7-25). The taught method involves positioning a mask having a configuration complementary to a required mark between the face of the lens to be marked and energizing discharge source in the form of a corona discharge (Column 2 Lines 7-24 and 46-50) and the source eliminates substantially the outermost low surface energy layer in order to reveal the substrate or underlying coating (Column 3 Lines 39-46).

Souel et al does not teach that there is deposited onto the outermost layer a temporary protection layer having a surface energy higher than that of the outermost layer and a thickness of less than about 5 nm to enable the discharge to act on the outermost layer through the temporary protection layer.

Medwick et al teaches a removable coating 16 for glass substrate 12 and glass substrates 12 having functional coatings 14 (Page 1 Paragraph 0002). Medwick et al teaches that the functional coatings 14 are those that protect the substrate from mechanical and/or chemical damage (Page 2 Paragraph 0011), which would include an anti-smudge hydrophobic layer. Medwick et al teaches that the removable coating 16 is deposited onto to provide protection of the substrate during processing of the glass substrate (Page 2 Paragraphs 0017-0018).

Medwick et al further teaches that the coating 16 is preferably no more than 2 micrometers but the exact thickness of the coating 16 is selected for a particular application based on the degree of protection of desired, the type of substrate, ect. (Pages 5-6 Paragraph 0044).

Thus based on the teachings of Medwick et al it would have been obvious to one of ordinary skill in the art to modify the thickness of the protective coating during routine experimentation to determine an optimal coating thickness for whatever processing step that the glass substrate was being subjected to.

Medwick et al further teaches that the coating 16 comprises such polymers as polyvinyl alcohol and ethylene oxide polymer (Page 4 Paragraph 0032). The Examiner takes the position that since these types of polymers are water-soluble polymers that they would have high surface energies and that their surface energies would be higher than a hydrophobic low surface energy coating like that taught by Souel et al.

At the time the present invention was made it would have been obvious to one of ordinary skill in the art to have applied a temporary or removable protective coating to a ophthalmic lens to provide protection of the lens substrate and/or the functional coatings on the lens substrate during processing of the lens substrate as taught by Medwick et al.

As for the limitation that the protective coating enables the discharge to act on the outermost layer through the temporary coating, since the protective coating of Medwick et al has a higher surface energy that the outermost coating of Souel et al and that it would have been obvious to one of ordinary skill to have the thickness of the protective coating be less than 5 nm, it would be inherent that the protective coating of Medwick et al would allow for the discharge to act on the outermost layer through the protective coating.

As for claim 2, as was discussed in the claim 1 rejection, Medwick et al teaches that the protective coating is preferably no more than 2 micrometers, thus anticipating the thickness range of approximately 2 nm to approximately 4 nm, and that the coating thickness is determined

based on the level of protection desired and the type of processing the glass substrate is being subjected to (Pages 5-6 Paragraph 0044).

As for claim 7, Medwick et al teaches that the protective coating is an evaporation product (Page 4 Paragraph 0033), thus it was deposited by evaporation.

As for claim 8, since Medwick et al teaches that the protective coating 16 can be deposited over the entire surface of the glass substrate 12 (Page 4 Paragraph 0029) and that the protective coating 16 is present when the glass substrate is trimmed (Page 2 Paragraph 0017) it would be inherent that the protective coating is deposited on a region of the face intended to be in contact with a shoe for retaining the lens during trimming.

As for claim 9, Medwick et al teaches that the protective coating has a substantially continuous structure (Page 6 Paragraph 0045).

As for claim 11, since the temporary protective coating covers and protects any underlying layers or surfaces it is a screen.

As for claim 14, Souel et al teaches that the hydrophobic layer can be a CRIZAL top coat (Column 3 Lines 7-10) and CRIZAL inherently comprises fluorinated groups.

As for claim 15, Souel et al teaches that the hydrophobic layer is deposited onto an antireflection coating on the lens (Column 3 Lines 18-25).

As for claims 16, Souel et al teaches the outermost coating comprises a plurality of layers (Column 3 Lines 7-25).

As for claim 17, Medwick et al teaches that the protective coating is removed or eliminated after cutting or trimming (Page 6 Paragraph 0049).

As for claim 19, Medwick et al teaches that the protective coating is removed or eliminated by dry wiping (Page 4 Paragraph 0031).

As for claim 21, Medwick et al teaches washing with water, which has a pH substantially equal to 7, after trimming or cutting (Page 6 Paragraph 0049). Though Medwick et al teaches water washing of the substrate to remove the temporary coating, the Examiner takes the position that the washing with water of the substrate as taught by Medwick et al would continue past the removal of the temporary coating in order to fully clean the substrate.

11. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souel et al in view of Medwick et al as applied to claim 1 above, and further in view of MacNutt (U.S. Patent 2,536,075).

The teachings of Souel et al in view of Medwick et al as applied to claim 1 have been discussed previously. Neither Souel et al nor Medwick et al teach that the temporary protection layer is a metal fluoride in the form of magnesium fluoride. Medwick et al does teach that the temporary protective coating may be any high emissivity composition that can be thermally decomposed without adversely impacting the substrate and/or underlying functional coating (Page 8 Paragraph 0059).

MacNutt teaches a method of removing an outermost layer of magnesium fluoride (Column 1 Lines 5-10) by a thermal treatment process (Column 2 Lines 23-44). Furthermore, MacNutt teaches that magnesium fluoride is a well known anti-reflection coating material for optical glasses (Column 1 Lines 43-52) and since magnesium fluoride has high ant-reflection characteristics it also has a high emissivity for energy and light. Furthermore, MacNutt teaches

that the magnesium fluoride coating can be removed without adversely affecting the underlying substrate (Column 4 Lines 29-37).

At the time the present invention was made it would have been obvious to one of ordinary skill in the art to comprise the temporary protection layer out of magnesium fluoride. It would have been obvious to one of ordinary skill in the art to try magnesium fluoride as a material for the temporary protection layer of Medwick et al because, as it taught by MacNutt, it is a high emissivity composition that can be removed by thermal decomposition without adversely affecting the underlying substrate and it is a well known exterior layer for optical substrates.

12. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souel et al in view of Medwick et al as applied to claim 1 above, and further in view of Kimock et al (U.S. Patent # 5,190,807).

The teachings of Souel et al in view of Medwick et al as applied to claim 1 have been discussed previously. Souel et al teaches that underneath the outermost hydrophobic anti-smudge layer a hard coat and an anti-reflective coat have been deposited onto the surface of the substrate and these two layers would inherently be either a mineral or organic layer (Column 3 Lines 7-25). But neither Souel et al nor Medwick et al teach treating the surface of the lens by energetic and/or reactive substance capable of attacking and/or chemically modifying the surface prior to depositing a mineral or organic layer.

Kimock et al teaches a method for improving the adhesion of a hard coating to a optically transparent polymeric substrate by first treating the surface of the substrate with a reactive

substance in the form of an adhesion-mediating polysiloxane polymer to chemically modify the surface of the substrate before depositing the hard coating (Column 4 Lines 48-68 and Column 5 Lines 1-17).

At the time the present invention was made it would have been obvious to one of ordinary skill in the art to treat the surfaces of a lens with a reactive substance to chemically modify the surface prior to deposition of one or more mineral or organic layers and a hydrophobic and/or oleophobic outermost layer. It would have been obvious to treat the surfaces of the lens of Souel et al by the method of Kimock et al prior to the deposition of the hard coating in order to improve the adhesion between the hard coat and the lens substrate.

As for claim 24, it would have been obvious to deposit the temporary protection layer on the second face of the lens so that the second face of the lens would receive protection during the processing steps of the lens.

Conclusion

Claims 1-2, 4-5, 7-9, 11, 14-17, 19 and 21-24 have been rejected. Claims 3, 6, 10, 12-13, 18 and 20 have been withdrawn from consideration as being non-elected species. No claims have been allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wieczorek whose telephone number is (571)270-5341. The examiner can normally be reached on Monday through Friday; 7:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MPW/

/Michael Wieczorek/
Examiner, Art Unit 1792

/Michael Cleveland/
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